Internet Environment
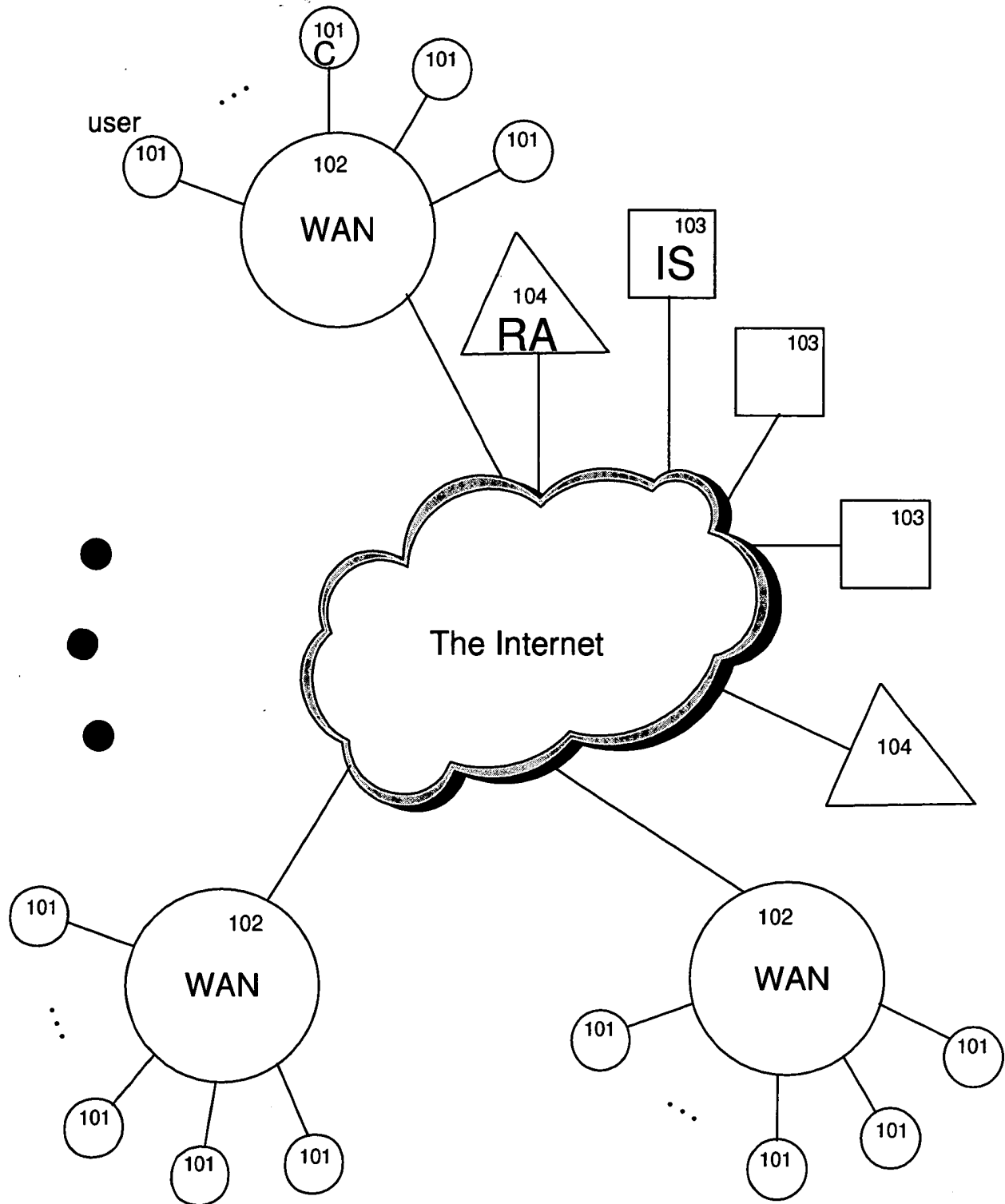

Figure 1

Relationship Analyzer
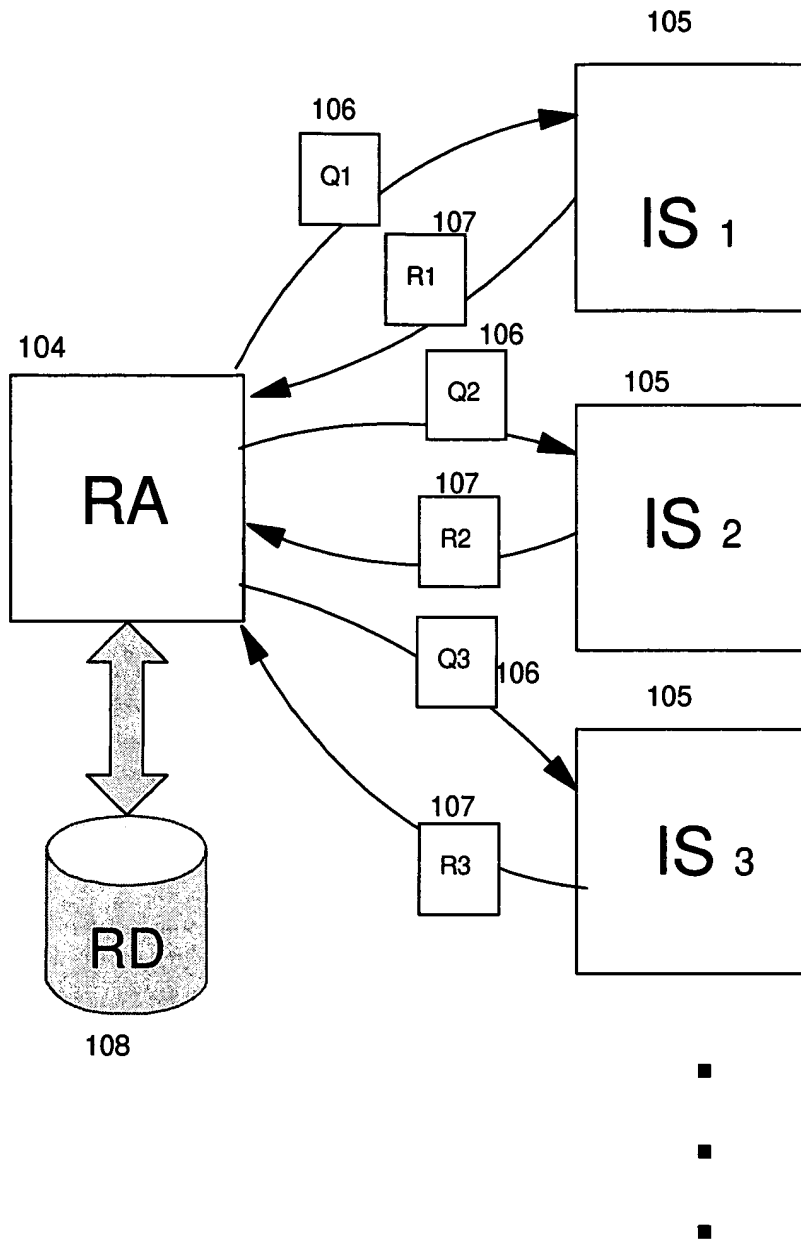

Figure 2

Modify/Filter Query
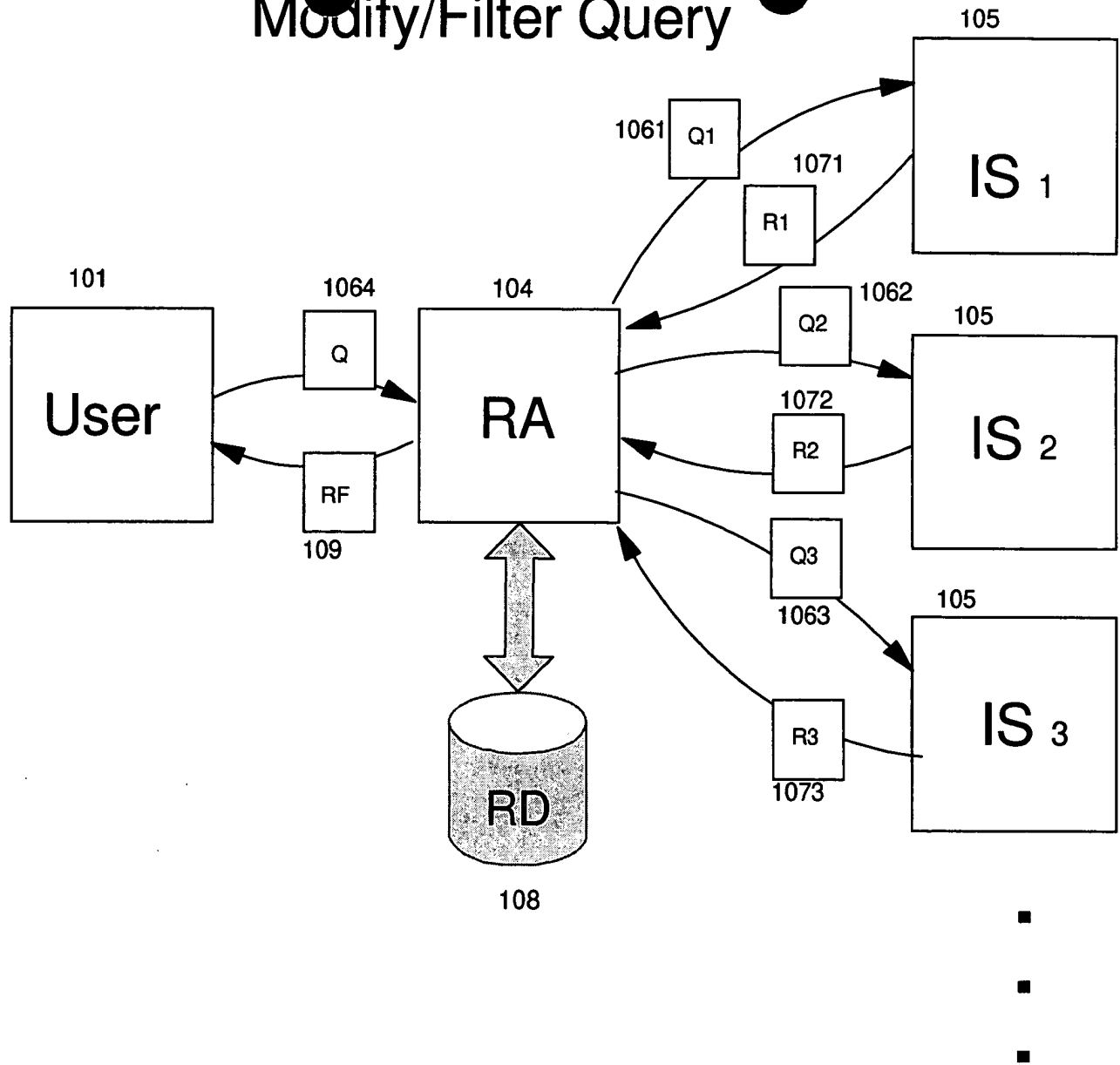

Figure 3

Example - Combine Results
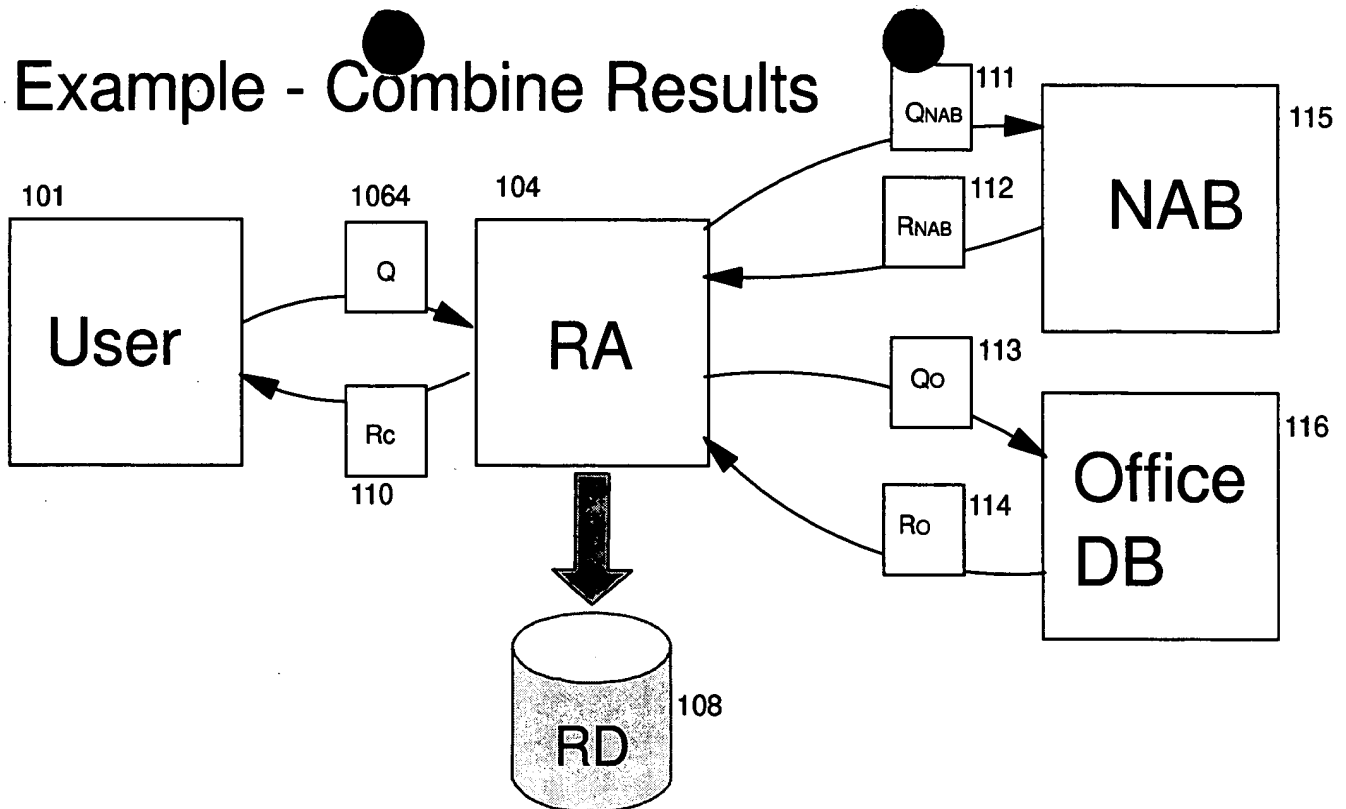

Figure 4A

RNAB - Response from NAB

John Q Smith	John Q Smith/SalesDivision/XYZCorp
John Q Smith	John Q Smith/MktgDivision/XYZCorp

Ro - Response from Office DB

John Q Smith	Florida
John Q Smith	New York

Rc - Combined Response

John Q Smith	John Q Smith/SalesDivision/XYZCorp	Florida
John Q Smith	John Q Smith/MktgDivision/XYZCorp	New York

Figure 4B

Example - Priority-Order Results

| 101 | 1064 | 104 | | 106 | 115 |

User — Q → RA — Q → NAB

← Ropt — | ← R — 107
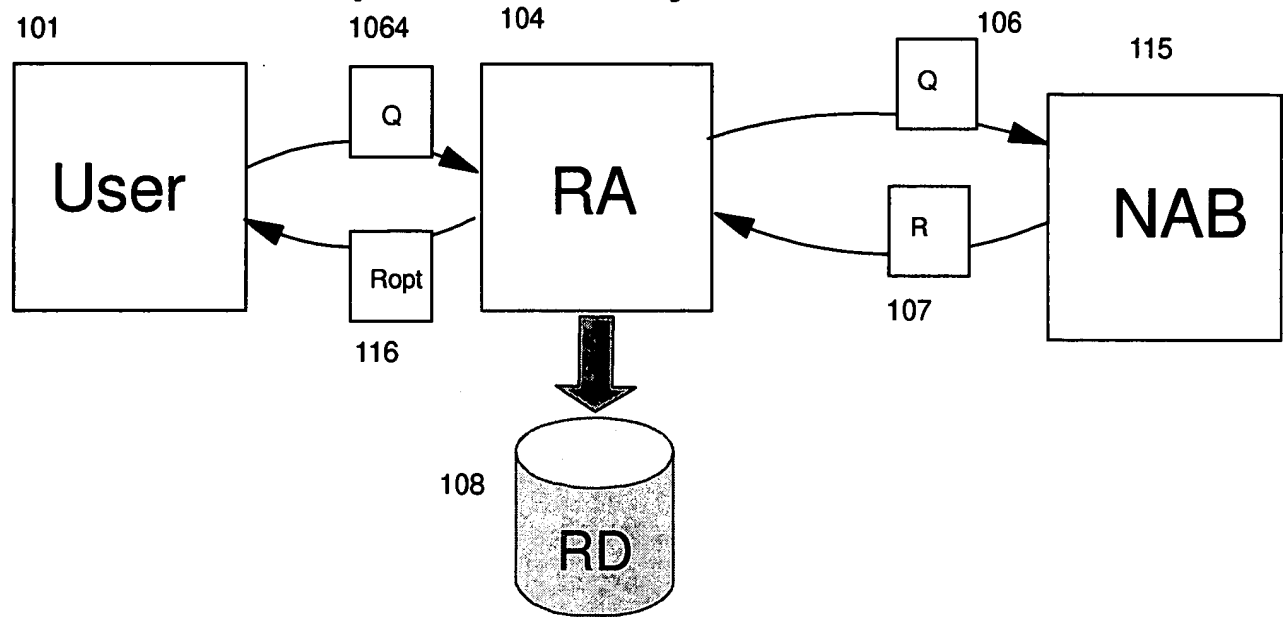
116

108 RD

Figure 5A

Query - on behalf of George A Jones/MktgDivision/XYZCorp

e-mail name for **John Smith**?   1064

Response

John Q Smith	John Q Smith/SalesDivision/XYZCorp
John P Smith	John P Smith/MktgDivision/XYZCorp

107

1080 Relationship Data - for George A Jones/MktgDivision/XYZCorp

John Q Smith/SalesDivision/XYZCorp	10	1081
John P Smith/MktgDivision/XYZCorp	20	1082

Sorted Response

John P Smith	John P Smith/MktgDivision/XYZCorp
John Q Smith	John Q Smith/SalesDivision/XYZCorp

116

Figure 5B

Figure 6 - Operation of the RA

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Relationship Info

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User Query

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6
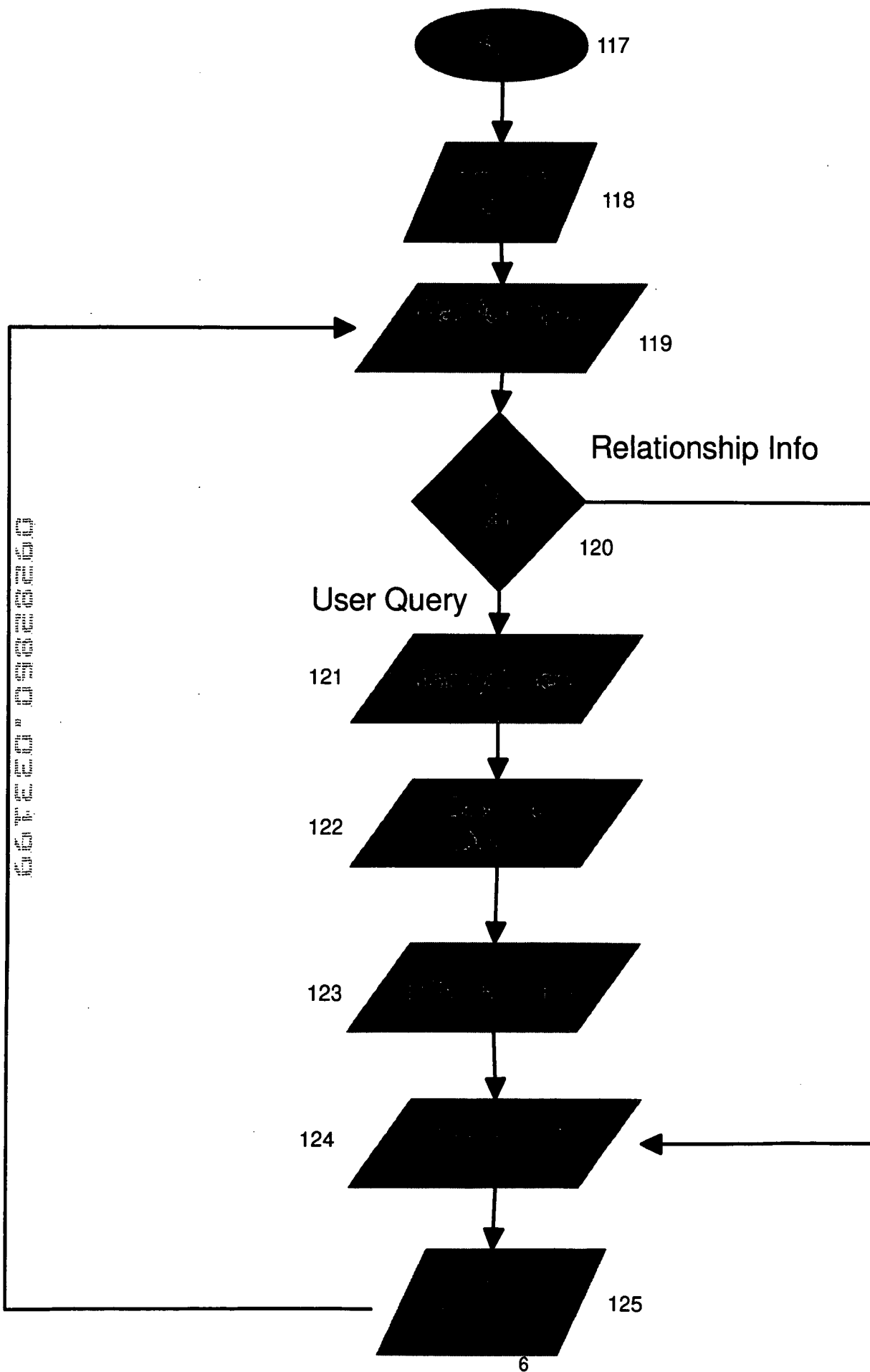
Figure 7A - Sample Relationship Graph
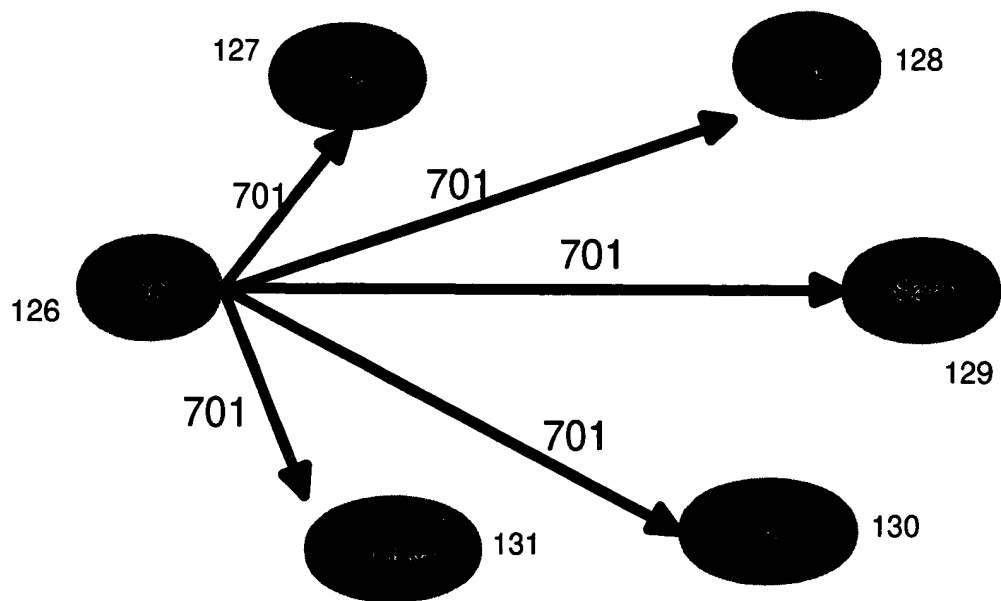
Relationship Values for "Jo" (700)

	Fred	Pat	Sam	Al	Mickey
Ri("Org Chart")	0.8	0.5	0.5	0.1	0.0
Ri("Mailing List")	0.7	0.6	0.2	0.0	0.5
Ri("Calendar")	0.2	0.6	0.6	0.0	0.1
R("Jo") (sum Ri's)	1.7	1.7	1.3	0.1	0.6

Preference ratings for information sources (702):
{ P("Org Chart") = 0.2, P("Mailing List") = 0.5, P("Calendar") = 0.3 }
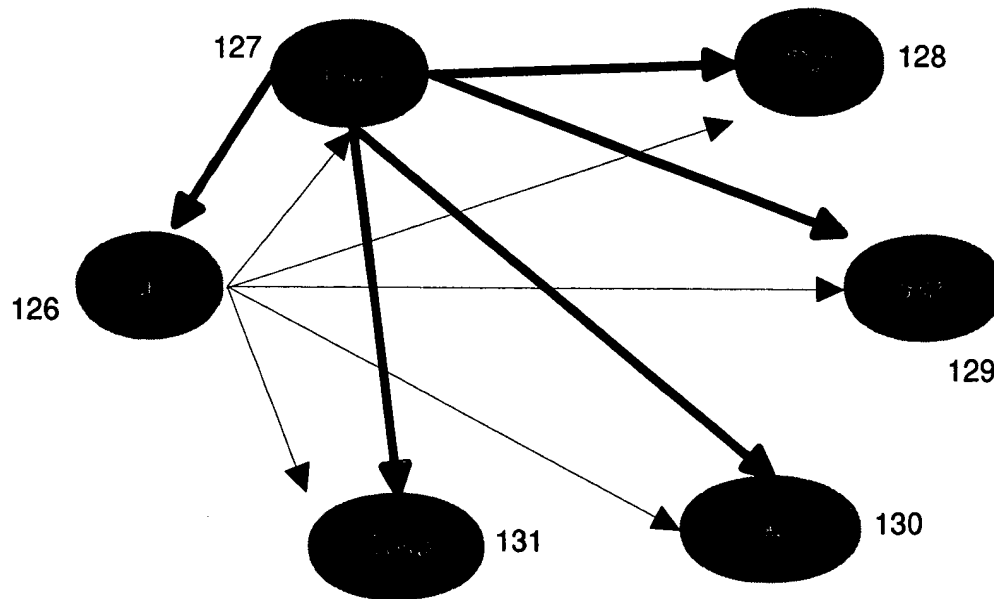
Weighted Relationship Values (703)

Rp("Jo",(Fred...))	0.57	0.58	0.38	0.02	0.28

Relation-Group Cutoff (704)
RG cutoff = 0.35

Relation-Groups For "Jo" (705)
RG("Jo") = { Fred, Pat, Sam }

Figure 7B - Sample Derived Relationship Graph

Weighted Relationship Values for Fred (706)

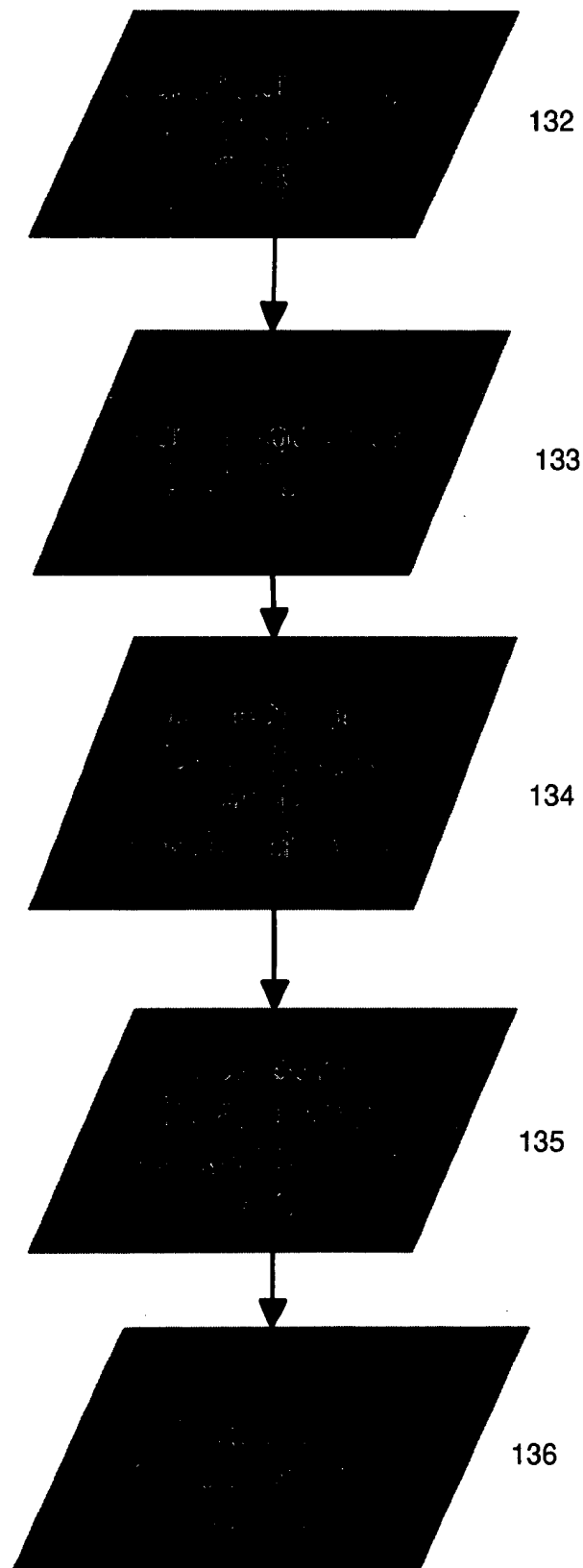|	Pat	Sam	Al	Mickey	Jo
Rp("Fred", y)	0.4	0.6	0.2	0.8	0.6

Derived Relation-Group Cutoff (707)
DRG cutoff = 0.5

Derived Relation-Group For Jo (708)
DRG("Jo") = { Fred, Pat, Sam, **Mickey** }

Figure 8 - Initialize RD

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Figure 9 - Compute Relationship Values

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241
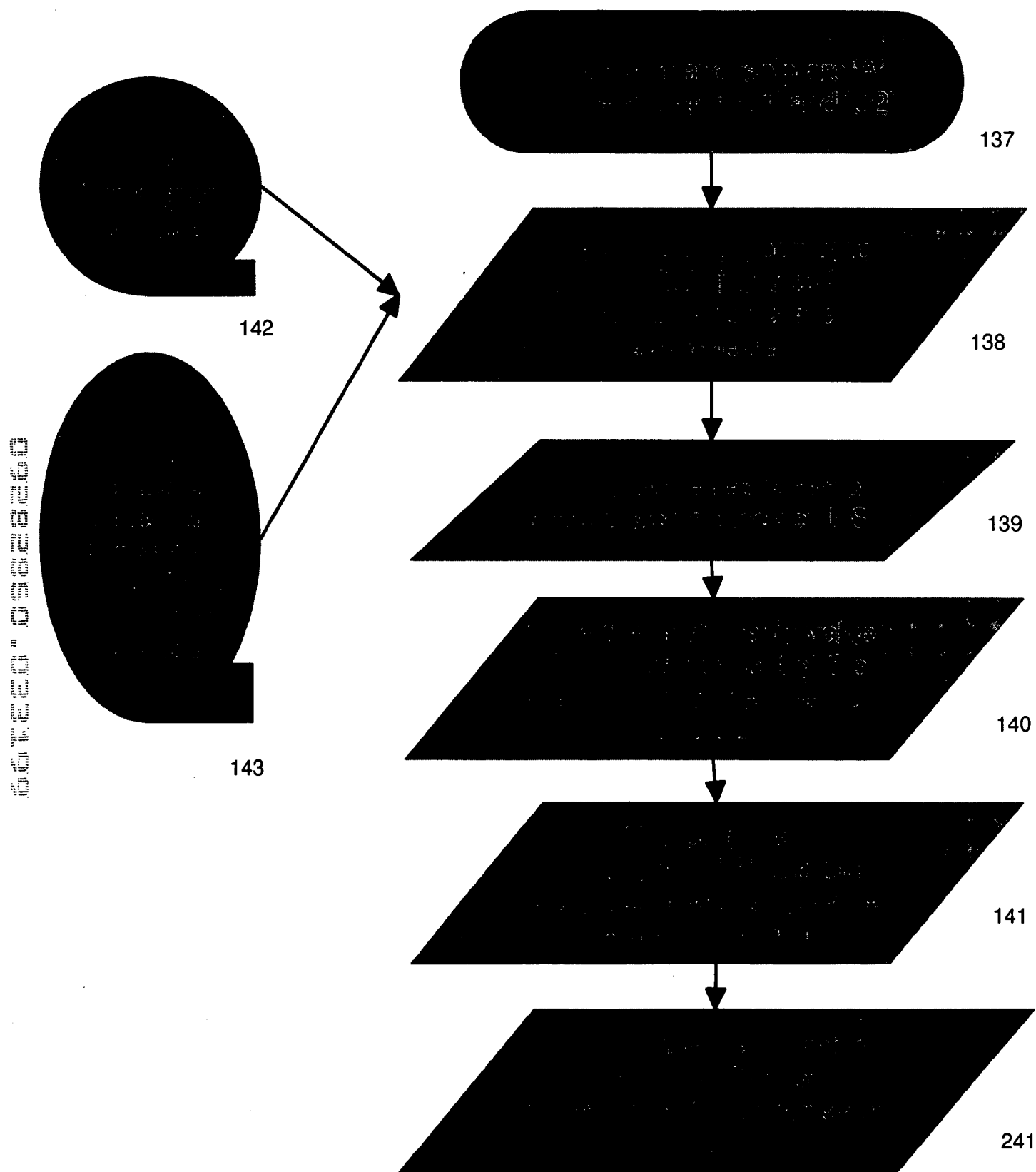
Figure 10 - Modify Query

144

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146

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Figure 11 - Execute Query

148

yes 149

no

150

151

152

153

12 154

return the query result 155
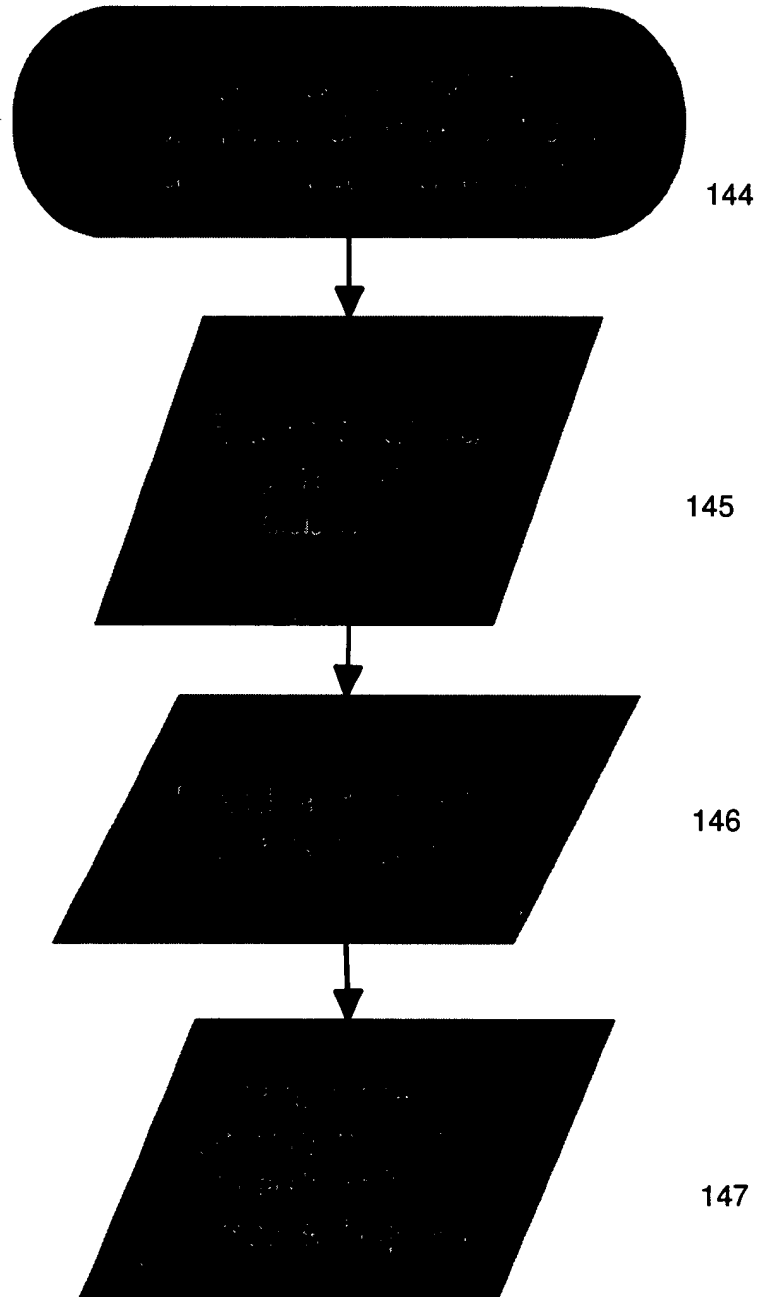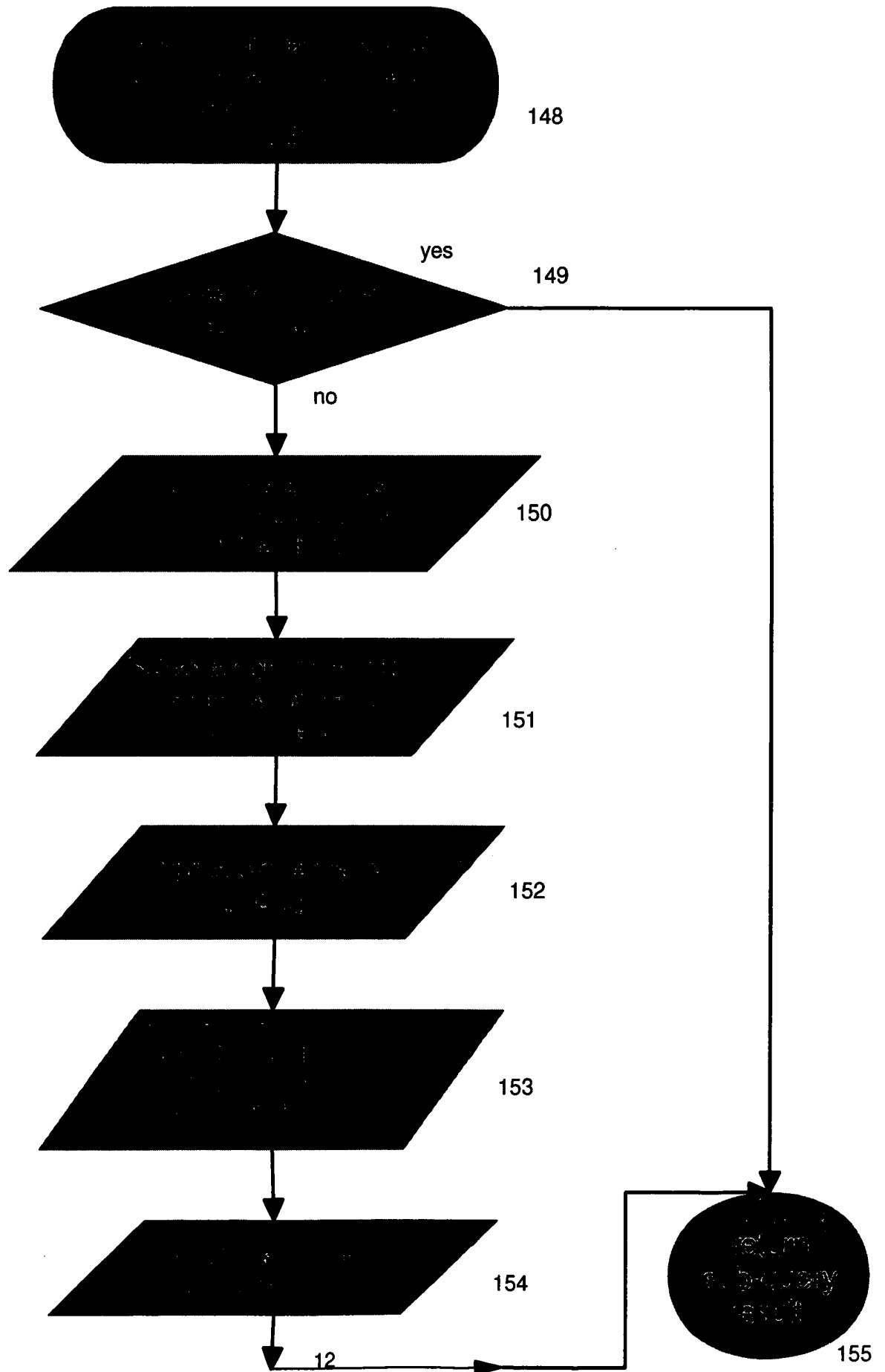
Figure 12 - Filter Results

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no

yes

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no

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yes

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13